



SDG 11: Sustainable cities and communities

Make cities and human settlements
inclusive, safe, resilient and
sustainable



With 193 governments coming together to agree a common framework to tackle 17 major world issues by 2030, business engagement to achieve them is seen as critical. So how do you understand the implications of the SDGs and prioritise them? How do you quantify and minimise the potential risks, and explore the opportunities?

This is an extract from PwC's Navigating the SDGs: a business guide to engaging with the UN Global Goals 2016 on SDG 11 Sustainable cities and communities. For more on the other 16 SDGs, go to www.pwc.com/globalgoals



What's the global challenge?

- Urbanisation is one of the most important megatrends this century – already **over half of the world's population live in urban areas**, this will rise to two thirds by 2050.¹
- Cities are economic powerhouses, generating **more than 80% of global GDP**.² However, **social problems** are concentrated in urban spaces, including extreme poverty, housing shortages and slum settlements – they are also centres of **environmental degradation**.
- **Air pollution** and waste are increasing problems in cities worldwide. 78% of urban areas (in a study looking at 851 cities in 72 countries) have levels of particulate matter air pollution exceeding the WHO Air Quality Guidelines.³ This poses stark health risks and represents an often overlooked global health crisis.
- Urban areas also have a crucial role to play in **tackling climate change**, as almost 70% of global greenhouse gas emissions come from cities.⁴ Sources overlap and include air pollution from transport, densely concentrated industrial and domestic energy use, and municipal uses such as street lighting.
- Many cities are particularly **vulnerable to disasters** and the projected impacts of climate change – including coastal sea level rise, urban heat waves, and other extreme weather events.
- Considered and **smart urban planning** is key to ensuring safe, resilient and sustainable cities, as lock-in of physical infrastructure and land use can last for decades.

Why does it matter for business? And what can business do?

Cities are important as centres of business activity, providing companies with concentrated populations of potential customers and employees. Poorly designed cities put barriers in the way of doing business effectively; but a well-planned urban environment, with effective transport and reliable municipal services, reduces the costs of doing business and improves productivity.

Companies in the real estate, infrastructure and finance/ investment sectors can have the greatest impact, but the choices all companies make about their city-based operations can make a difference.

- ▶ When making business decisions on locating buildings or activities in urban locations, companies need to carry out **social and environmental impact assessments** and **engage community stakeholders**. Impact assessments help businesses to stay on the front foot, proactively identifying and responding to risks and opportunities. But without community engagement companies still run the risk of pushback against certain activities. Much better to consult and get **buy-in** early. Impact assessment and community engagement are particularly important in countries where **planning control processes are weak**.

? *Do you have a **community engagement strategy** which is used whenever new urban locations are considered? Do you routinely carry out **social and environmental impact assessments**? How are the findings incorporated into **business decision-making**? What **governance processes** do you have in place to make sure your community engagement and impact assessment policies are followed?*

- ▶ Achieving a **green buildings certification** for a business premises can reduce **building running costs** and the **environmental footprint** of their operations. These certifications, which include BREEAM, LEED, GCBA and CASBE, are widely recognised green hallmarks and, as such, can also significantly enhance **corporate reputation** and **customer engagement**.

? *Have you considered the potential **business benefits** of certifying your business premises against green buildings standards? Do you know if this is something your **customers would give credit for** when selecting their suppliers?*

- ▶ As well as being a major source of **urban air pollution** and the fastest growing source of global CO2 emissions,⁵ **transport** accounts for a significant proportion of many businesses' environmental impact.

? *Do you factor the **environmental costs** of transport emissions and pollution into strategic procurement and logistics decisions? Do you have targets to reduce your environmental impact in this area?*

- ▶ **Public transport systems** such as light rail, tram and metro transit systems are alternatives to carbon-intensive urban individual transport. **Active travel**, such as cycling and walking, is not only emission free, but also promotes good health through physical activity.

- ▶ **Home working** can reduce environmental impact, relieve the increasing pressure on many urban public transport systems, as well as support employees' work-life balance.

? *Could your staff make more use of public transport when carrying out their work? Do you know how your staff commute to work? Can you incentivise them to use public transport to travel to work, e.g. by providing travel card loans or cutting car park space? Can you encourage active commuting, e.g. through loans to buy bicycles and provision of showering facilities?*

? *Do your ICT systems and HR policies allow remote working, which would relieve pressure on transport routes and improve employee flexibility?*

- ▶ **Urban resilience to climate impacts and disasters** is an increasingly important risk factor for the private sector. All cities are vulnerable to damage to some extent, given their dense populations and high concentrations of buildings and valuable infrastructure. However some are in particularly high-risk locations, such as **coastal areas**. **Climate change** will increase the frequency and severity of extreme events such as flooding, heat waves and storm surges.

? *Have you planned how your business will respond to disasters? How could you increase the **resilience** of your business in its urban locations? This may include employee education and training, resilient building design, or risk assessment across your supply chain to identify and address vulnerable points.*

? *In the **event of a disaster**, what could your business do to help others? Supermarkets could, for example, provide food and logistics; telecommunications companies could supply free communications and text updates, etc.*

You could also think about:

? *Can your staff access **affordable housing**, or afford to live close to work? If not, are there ways you can improve the situation, perhaps by providing transport solutions or promoting flexible working? This is likely to increase employee wellbeing and productivity, as long commutes are draining and travel costs can be a large proportion of employee household expenditure.*

? *Could your **urban community engagement** activities aim to increase the resilience of your local communities to climate impacts and disasters? This might include education and awareness raising, or physically improving community buildings such as schools.*

? *How well your **employee profile** reflects the diversity of the urban populations where your business is located. What more could you do to create employment opportunities for people from a range of backgrounds/socio-demographic groups?*

Key links to other SDGs:



Goal 1 – No poverty: many cities have rapidly growing informal settlements, with high concentrations of extreme urban poverty. The poorest communities are also the most vulnerable to climate risks and disasters, which can push the precarious poor back into extreme poverty – hence resilient cities are a key part of ensuring that progress on poverty is maintained.

Goal 3 – Good health and well-being: reducing air pollution in cities will significantly improve human health: it is a significant causal factor in stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma.

Goal 6 – Clean water and sanitation: water and sanitation systems are a key municipal challenge in all cities, with growing populations, pollution, water availability and informal settlements all posing challenges to adequate provision of both services.

Goal 9 – Industry, innovation and infrastructure: physical infrastructure underpins effective municipal services, and effective design of buildings and infrastructure is a key part of urban resilience.

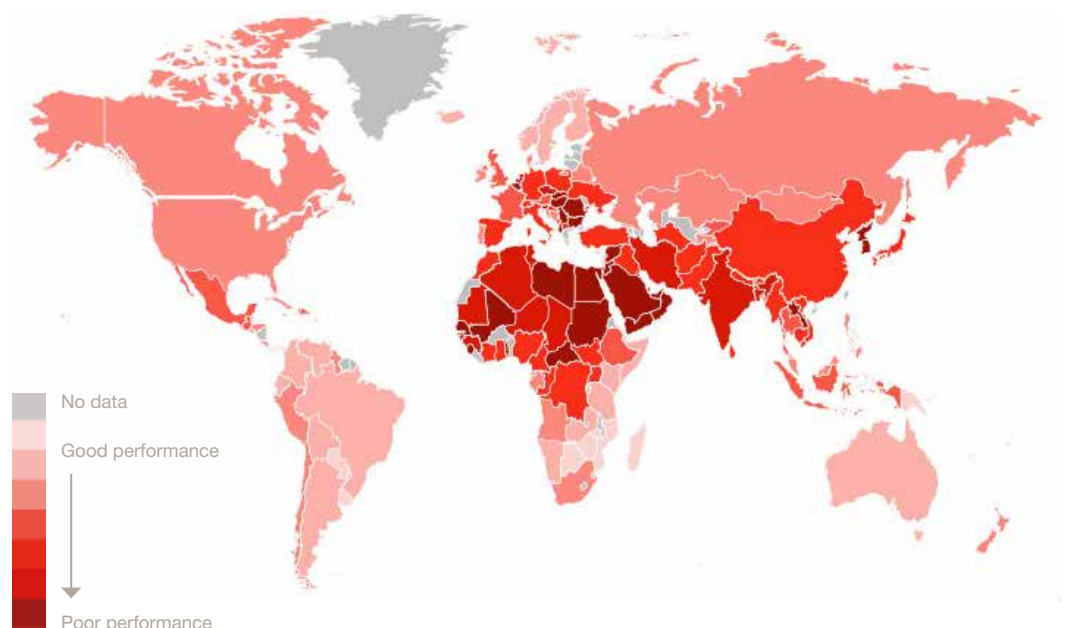
Goal 12 – Responsible consumption and production: as areas of concentrated economic activity and high population density, cities are major consumers of resources and major producers of emissions, pollution and waste. The issue of sustainable consumption and production is therefore key to ensuring sustainable cities.

**Targets
in focus**

SDG 11 has ten targets. One of them is “By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums”. Target 11.6 is illustrated in the heat map and states that “By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management”. For details on the remaining targets, please see ‘Global Goals and targets’ on page 5.

The lie of the land – exploring the distance to cover to achieve

Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management



Global Goals and targets

Please note 'Targets' are referenced as n.1 n.2 n.3 etc. 'The means of implementing the targets' are referenced as n.a n.b n.c etc.



Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

- 11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
- 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
- 11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
- 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage
- 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations
- 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
- 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities
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- 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning
- 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels
- 11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

Sources

- 1 UNDP, Goal 11: Sustainable cities and communities, webpage <http://www.undp.org/content/undp/en/home/mdgoverview/post-2015-development-agenda/goal-11.html>
- 2 New Climate Economy, Seizing the Global Opportunity, 2015, <http://2015.newclimateeconomy.report/>
- 3 WHO's Ambient Air Pollution database Update 2014, http://www.who.int/phe/health_topics/outdoorair/databases/AAP_database_results_2014.pdf?ua=1
- 4 World Bank, Urban Development – Overview, webpage <http://www.worldbank.org/en/topic/urbandevelopment/overview>
- 5 World Bank, Urban Transport and Climate Change, webpage <http://www.worldbank.org/en/news/feature/2012/08/14/urban-transport-and-climate-change>

How well are countries performing against the indicators that sit behind the SDG goals and targets?

SDG 11 Indicator Profile: PM2.5 in urban areas

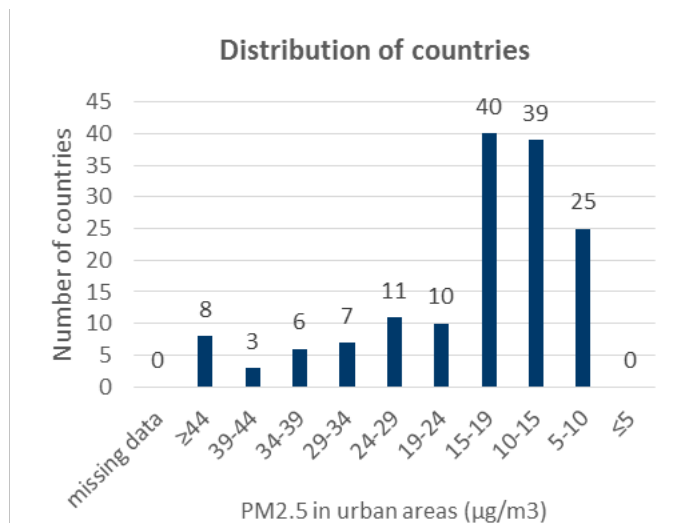
(NB. this table is from the SDG Index & Dashboards - Global Report)



PM2.5 in urban areas ($\mu\text{g}/\text{m}^3$)

Country	Value/Rating
Australia	5.9 ●
Norway	6 ●
Madagascar	6.2 ●
Uruguay	6.7 ●
Panama	6.8 ●
Finland	7 ●
Nicaragua	7 ●
Iceland	7.2 ●
Sweden	7.3 ●
Mozamb.	7.3 ●
Ireland	7.9 ●
Namibia	8.3 ●
Mongolia	8.3 ●
New Zealand	8.6 ●
Philippines	8.6 ●
Honduras	8.7 ●
Guyana	8.7 ●
Argentina	9 ●
Estonia	9.1 ●
Zimbabwe	9.1 ●
Malawi	9.1 ●
Trinidad and Tobago	9.2 ●
Tanzania	9.2 ●
Costa Rica	9.3 ●
Mauritius	9.7 ●
Botswana	9.7 ●
Portugal	9.9 ●
Swaziland	10.4 ●
USA	10.7 ●
Lesotho	10.7 ●
UK	10.8 ●
Bolivia	10.9 ●
Gabon	10.9 ●
Jamaica	11.1 ●
Denmark	11.4 ●
Kenya	11.4 ●
Suriname	11.5 ●
Spain	11.7 ●
Zambia	11.8 ●
Mexico	11.9 ●
Latvia	12 ●
Canada	12.1 ●
Guatemala	12.4 ●

Country	Value/Rating
Dominican Republic	12.5 ●
Colombia	12.6 ●
El Salvador	12.9 ●
Peru	12.9 ●
Venezuela	13.4 ●
Haiti	13.4 ●
Slovenia	13.6 ●
Belarus	13.6 ●
Bosnia and Herzegovina	13.6 ●
Lithuania	13.8 ●
Congo, Rep.	13.8 ●
Croatia	13.9 ●
Ecuador	13.9 ●
France	14 ●
Angola	14 ●
Malta	14.1 ●
Paraguay	14.1 ●
Russia	14.2 ●
Kazakhstan	14.2 ●
South Africa	14.3 ●
Malaysia	14.4 ●
Austria	14.8 ●
Luxemb.	14.8 ●
Indonesia	14.8 ●
Montenegro	15 ●
Ukraine	15.1 ●
Germany	15.3 ●
Greece	15.4 ●
Georgia	15.5 ●
Hungary	15.8 ●
Serbia	15.8 ●
Bulgaria	15.9 ●
Slovakia	15.9 ●
Albania	15.9 ●
Japan	16 ●
Tunisia	16.3 ●
Cyprus	16.5 ●
Brazil	16.5 ●
Czech Republic	16.6 ●
Singapore	16.7 ●
Romania	16.8 ●
Netherlands	16.8 ●



Country	Value/Rating
Poland	17 ●
Macedonia	17 ●
Rwanda	17 ●
Moldova	17.1 ●
Sri Lanka	17.1 ●
Burundi	17.1 ●
Turkey	17.2 ●
Morocco	17.4 ●
Switzerland	17.6 ●
Ethiopia	17.6 ●
Uganda	17.6 ●
Armenia	17.8 ●
Congo, Dem. Rep.	18.1 ●
Italy	18.3 ●
Kyrgyzstan	18.3 ●
Chile	18.4 ●
Belgium	18.5 ●
Algeria	19.3 ●
CAR	19.3 ●
Tajikistan	19.6 ●
Cambodia	19.7 ●
Cote d'Ivoire	20.3 ●
Azerbaijan	20.8 ●
Cameroon	21.3 ●
Afghanistan	21.7 ●
Thailand	22.4 ●
Liberia	22.7 ●
Lebanon	23.6 ●
Sierra Leone	23.9 ●
Togo	25.4 ●
Vietnam	25.5 ●
Jordan	25.6 ●

Country	Value/Rating
Israel	25.8 ●
Ghana	26.5 ●
Sudan	26.6 ●
Benin	26.7 ●
Guinea	27 ●
Lao PDR	27.5 ●
Bhutan	28.1 ●
Myanmar	28.9 ●
Korea, Rep.	29.1 ●
Burkina Faso	29.2 ●
Nigeria	29.5 ●
Oman	30.4 ●
Chad	30.7 ●
Iran	31.9 ●
Iraq	32.6 ●
Gambia	34.8 ●
Mali	35.9 ●
emen, Rep.	36.2 ●
Egypt	36.4 ●
Niger	38.1 ●
Qatar	38.4 ●
UAE	40.9 ●
Senegal	41.2 ●
Cabo Verde	43.1 ●
Nepal	46.1 ●
Pakistan	46.2 ●
India	46.7 ●
Bangladesh	48.4 ●
Kuwait	49.1 ●
Saudi Arabia	54.1 ●
China	54.4 ●
Mauritania	70.1 ●

Source : Brauer et al. (2015). Years : 2013. Detailed metadata and quantitative thresholds used for each indicator are available online at www.sdgindex.org. Data refer to the most recent year available during the period specified.

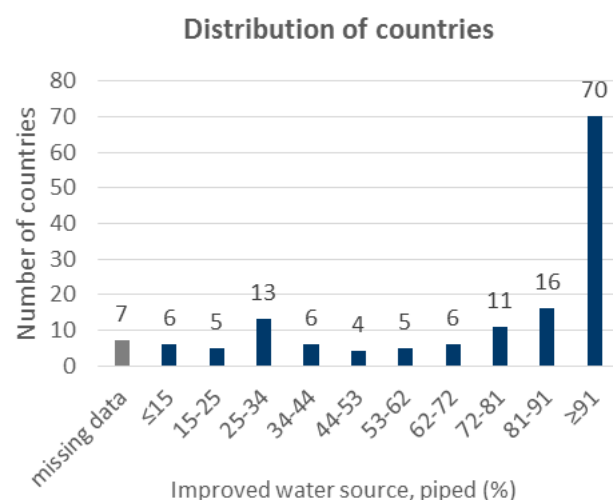
How well are countries performing against the indicators that sit behind the SDG goals and targets?

SDG 11 Indicator Profile: Improved water source, piped
(NB. this table is from the SDG Index & Dashboards - Global Report)



Improved water source, piped (%)

Country	Value/Rating	Country	Value/Rating
Austria	100 ●	Brazil	97.7 ●
Belgium	100 ●	Hungary	97.7 ●
Canada	100 ●	Belarus	97.6 ●
Cyprus	100 ●	Guatemala	97.4 ●
Czech Republic	100 ●	Honduras	97.4 ●
Denmark	100 ●	Latvia	97 ●
Egypt	100 ●	Panama	96.8 ●
Estonia	100 ●	Botswana	96.5 ●
Finland	100 ●	Georgia	96.2 ●
France	100 ●	Serbia	96.2 ●
Germany	100 ●	Bolivia	96.1 ●
Greece	100 ●	Mexico	95.9 ●
Iceland	100 ●	Slovakia	95.9 ●
Israel	100 ●	Tunisia	94.5 ●
Luxemb.	100 ●	Iran	94.3 ●
Malaysia	100 ●	Montenegro	94.2 ●
Malta	100 ●	Colombia	94.1 ●
Netherlands	100 ●	Qatar	94.1 ●
New Zealand	100 ●	Russia	93.9 ●
Norway	100 ●	Jordan	93.2 ●
Portugal	100 ●	Bosnia and Herzegovina	93.1 ●
Singapore	100 ●	Paraguay	92.9 ●
Spain	100 ●	Ecuador	92.8 ●
Sweden	100 ●	South Africa	91.7 ●
Switzerland	100 ●	Nicaragua	91.4 ●
Turkey	100 ●	Morocco	91 ●
UK	100 ●	Kazakhstan	90.5 ●
Uruguay	100 ●	Venezuela	90.3 ●
Italy	99.9 ●	Jamaica	90.2 ●
Mauritius	99.9 ●	Azerbaijan	89.5 ●
Armenia	99.7 ●	El Salvador	87.9 ●
Chile	99.7 ●	Kyrgyzstan	87.7 ●
Costa Rica	99.6 ●	China	87.2 ●
Croatia	99.6 ●	Peru	86.4 ●
Lithuania	99.3 ●	Ukraine	86.3 ●
Slovenia	99.3 ●	Albania	86.2 ●
Korea, Rep.	99.2 ●	Moldova	85.7 ●
Bulgaria	99.1 ●	Oman	84.5 ●
Poland	99.1 ●	Trinidad and Tobago	83.5 ●
USA	99 ●	Iraq	82.9 ●
Japan	98.7 ●	Tajikistan	82.6 ●
Macedonia	98.7 ●	Algeria	82.4 ●
Argentina	98.1 ●	Senegal	80.4 ●
Ireland	97.9 ●	Bhutan	79.9 ●



Country	Value/Rating	Country	Value/Rating
Lebanon	77.1 ●	Indonesia	32.5 ●
Suriname	76.9 ●	Bangladesh	32.3 ●
Thailand	75.9 ●	Ghana	32.2 ●
Dominican Republic	75.8 ●	Angola	31.6 ●
Guyana	75.8 ●	Afghanistan	31.2 ●
Cambodia	75.3 ●	Rwanda	27.8 ●
Swaziland	74.8 ●	Cameroon	27.7 ●
Zimbabwe	73.6 ●	Tanzania	27.7 ●
Sri Lanka	72.9 ●	Burkina Faso	26.6 ●
Gabon	71.8 ●	Mozamb.	25.2 ●
Lesotho	70 ●	Chad	24.8 ●
Namibia	69.3 ●	Uganda	23.4 ●
Cote d'Ivoire	65.8 ●	Myanmar	18.6 ●
Lao PDR	63.9 ●	Congo, Dem. Rep.	17 ●
Cabo Verde	62.9 ●	Madagascar	15.9 ●
Vietnam	61.3 ●	Haiti	13.3 ●
Pakistan	60.9 ●	Togo	12.8 ●
Philippines	59 ●	Sierra Leone	11.5 ●
Ethiopia	56.2 ●	Liberia	4.3 ●
India	53.8 ●	CAR	4 ●
Gambia	52.4 ●	Nigeria	3.5 ●
Nepal	49.9 ●	Australia	n/a ●
Burundi	49.5 ●	Kuwait	n/a ●
Kenya	44.9 ●	Romania	n/a ●
Niger	41.3 ●	Saudi Arabia	n/a ●
Mauritania	40.4 ●	Sudan	n/a ●
Guinea	36.9 ●	UAE	n/a ●
Congo, Rep.	36.7 ●	Yemen	n/a ●
Mali	36.7 ●		
Zambia	36.2 ●		
Benin	34.2 ●		
Malawi	33.2 ●		
Mongolia	33 ●		

Source : WHO & UNICEF (2016). Years : 2015. Detailed metadata and quantitative thresholds used for each indicator are available online at www.sdgindex.org. Data refer to the most recent year available during the period specified.

Source: Sachs, J., Schmidt-Traub, G., Kroll, C., Durand-Delacare, D. and Teksoz, K. (2016). An SDG Index and Dashboards – Global Report. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN). All indicators are based on published data. Each data point is coloured as “green”, “yellow” or “red”, indicating whether the country is close or at SDG achievement (green), is in a “caution lane” (yellow), or is seriously far from achievement as of 2015 (red), on that indicator. Thresholds are based on the authors’ analysis and expert assessments. For more detail, see www.sdgindex.org

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